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THE
UNIVERSITY OF MARYLAND

SUMMER SCHOOL

For the Session of
1934

ADMINISTRATIVE OFFICERS

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Woman's Advisory Committee:

MISS STAMP, MISS MOUNT and MISS SMITH.

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KEY TO BUILDINGS

L—Morrill Hall
N—Home Economics
T—Agricultural
FF—Horticultural
EE—Library
P—Mechanical Engineering
R—Electrical Engineering
Q—Civil Engineering
S—Engineering (New)
Gym.—Gymnasium
DD—Chemistry
M—Library (Old)
G.F.H.—Girls' Field House

INSTRUCTORS

C. O. APPLEMAN, Ph.D., Professor of Botany and Plant Physiology; Dean of the Graduate School....Botany

HAYES BAKER-CROTHERS, Ph.D., Professor of History and Political Science....History

FRANK A. BALSAM, Instructor of Electricity, Boys' Vocational School, Baltimore, Maryland....Education

RONALD BAMFORD, Ph.D., Associate Professor of Botany....Botany

J. H. BEAUMONT, Ph.D., Professor of Horticulture....Horticulture

EARL S. BELLMAN, M.A., Instructor in Sociology....Sociology

L. E. BLAUCH, Ph.D., Executive Secretary, American Association of Dental Schools, Survey of the Dental Curriculum, Chicago, Illinois....Education

V. R. BOSWELL, Ph.D., Lecturer in Olericulture....Horticulture

H. H. BRECHBILL, Ph.D., Assistant Professor of Education....Education

EDWIN W. BROOME, M.A., LL.B., Superintendent, Montgomery County, Maryland....Education

L. B. BROUGHTON, Ph.D., Professor of Chemistry; State Chemist....Chemistry

ROBERT P. CARROLL, Ph.D., Department of Teacher Training Extension, State College, Pennsylvania....Education

E. N. CORY, Ph.D., Professor of Entomology; State Entomologist....Entomology

H. F. COTTERMAN, Ph.D., Professor of Agricultural Education and Rural Sociology....Education

S. H. DEVAULT, Ph.D., Professor of Agricultural Economics....Agricultural Economics

RUTH DEVORE, B.S., Supervisor of Rural Schools, Carroll County, Maryland....Education

IVAN C. DIEHL, B.S., Head, Department of Geography, State Normal School, Frostburg, Md....Education

CARLETON E. DOUGLAS, A.M., Extension Instructor of Education, Baltimore, Md....Education

NATHAN L. DRAKE, Ph.D., Professor of Organic Chemistry ..... Chemistry

CLYDE B. EDGEWORTH, B.S., Supervisor of Commercial Education, Baltimore, Maryland ..... Education

C. G. EICHLIN, M.S., Professor of Physics ..... Physics

J. E. FABER, M.S., Instructor of Bacteriology ..... Bacteriology

W. F. FALLS, Ph.D., Assistant Professor of Modern Languages ..... French

EDGAR M. GERLACH, Supervisor of Social Service, Bureau of Prisons, U. S. Department of Justice ... Education

B. L. GOODYEAR, Instructor of Music ..... Music

G. A. GREATHOUSE, Ph.D., Assistant Professor of Plant Physiology and Biophysics ..... Botany

MILDRED GRIMES, M.A., Supervisor of Special Classes, Baltimore, Maryland ..... Education

HARRY A. GWINNER, M.E., Professor of Engineering Mathematics ..... Mathematics

CHARLES B. HALE, Ph.D., Associate Professor of English ..... English

A. B. HAMILTON, M.S., Assistant Professor of Agricultural Economics ..... Agricultural Economics

MALCOLM HARING, Ph.D., Professor of Physical Chemistry ..... Chemistry

SUSAN E. HARMAN, Ph.D., Associate Professor of English ..... English

LUCILE HARTMANN, B.S., Instructor of Foods, Nutrition and Institutional Management ..... Home Economics

H. C. HOUSE, Ph.D., Professor of English and English Literature ..... English

W. H. E. JAEGER, Ph.D., Assistant Professor of History and Political Science ..... History

W. B. KEMP, Ph.D., Professor of Genetics and Agronomy ..... Genetics; Statistics

LILLIAN B. KERR, Art Director, Parkersburg, West Virginia ..... Education

PAUL KNIGHT, M.S., Assistant Professor of Entomology ..... Entomology

JESSIE LASALLE, M.A., Assistant Superintendent of Schools, Washington, D. C. ..... Education

B. T. LELAND, M.A., Professor of Trade and Industrial Education ..... Education

EDGAR F. LONG, Ph.D., Professor of Education ..... Education

E. L. LONGLEY, Instructor of Sheet Metal Work, Garrison Avenue High School, Baltimore, Md. ..... Education

C. L. MACKERT, M.A., Professor of Physical Education for Men ..... Physical Education

EDNA MCEACHERN, M.A., Professor of Music, State Teachers College, Upper Montclair, New Jersey ... Education

FREDA MCFARLAND, M.A., Professor of Textiles and Clothing ..... Home Economics

EDNA B. MCNAUGHTON, M.A., Professor of Home Economics Education ..... Education

ELEANOR L. MURPHY, M.A., Assistant Professor of Home Management ..... Home Economics

J. B. S. NORTON, D.Sc., Professor of Systematic Botany and Mycology ..... Botany

M. W. PARKER, Ph.D., Assistant Professor of Plant Physiology and Biochemistry ..... Botany

ELIZABETH R. PHILLIPS, M.A., Instructor of Physical Education for Women ..... Physical Education

N. E. PHILLIPS, Ph.D., Assistant Professor of Zoology ..... Zoology

WILLIAM R. PHIPPS, B.S., Supervisor of Schools, Talbot County, Maryland ..... Education

HESTER BEALL PROVENSEN, LL.B., Director, Hester Walker Beall Studio of the Spoken Word, Washington, D. C. ..... Public Speaking

THOMAS W. PYLE, M.A., Principal, Bethesda-Chevy Chase High School, Bethesda, Maryland ..... Education

EDWARD F. RICHARDS, Ph.D., Instructor of Modern Languages ..... Spanish

C. S. RICHARDSON, M.A., Professor of Public Speaking and Extension Education ..... Public Speaking

RALPH RUSSELL, M.S., Assistant Professor of Agricultural Economics ..... Agricultural Economics

A. L. SCHRADER, Ph.D., Professor of Pomology ..... Horticulture

MARK SCHWEIZER, M.A., Assistant, Modern Languages ..... German

JOHN J. SEIDEL, B.S., State Supervisor of Industrial Education ..... Education

MARTHA SIBLEY, Supervisor of Elementary Schools, Hempstead, Long Island, N. Y. ..... Education

KATHLEEN M. SMITH, Ed.M., Instructor of Education ..... Education

J. T. SPANN, B.S., Assistant Professor of Mathematics ..... Mathematics

BARNEY SPEIR, M.A., Professor of Physical Education, Western Maryland College ..... Education

J. W. SPROWLS, Ph.D., Professor of Educational Psychology ..... Psychology

E. H. STEVENS, M.A., J.D., Summer Session Instructor of Government ..... History

C. E. TEMPLE, M.A., Professor of Plant Pathology, State Plant Pathologist ..... Botany

R. V. TRUITT, Ph.D., Professor of Zoology and Aquiculture ..... Zoology

TRACY F. TYLER, Ph.D., Secretary and Research Director, The National Committee on Education by Radio ..... Education

W. P. WALKER, M.S., Assistant, Agricultural Economist ..... Agricultural Economics

S. M. WEDEBERG, B.A., Assistant Professor of Accountancy and Business Administration ..... Economics

CLARIBEL P. WELSH, M.A., Associate Professor of Foods ..... Home Economics

FRANC H. WESTNEY, M.A., Instructor of Textiles and Clothing ..... Home Economics

C. E. WHITE, Ph.D., Associate Professor of Chemistry ..... Chemistry

HELEN WILCOX, B.A., Instructor of Modern Languages ..... French

R. C. WILEY, Ph.D., Associate Professor of Analytical Chemistry ..... Chemistry

GENERAL INFORMATION

The twentieth session of the Summer School of the University of Maryland will open Wednesday, June 27th, 1934, and continue for six weeks, ending Tuesday, August 7th.

In order that there may be thirty class periods for each full course, classes will be held on Saturday, June 30th, and Saturday, July 7th, to make up for time lost on registration day and July 4th, respectively. There will be no classes or other collegiate activities held on July 4th, which will be observed as a legal holiday.

The courses are planned to meet the needs of teachers in service and of students desiring to satisfy the requirements for undergraduate and graduate degrees.

LOCATION

The University is located at College Park in Prince George's County, eight miles from Washington and thirty-two miles from Baltimore. College Park is a station on the B. & O. R. R. and on the City and Surburban Electric Railway. Local and inter-urban bus lines pass the University. Washington, with its wealth of resources for casual visitation, study and recreation is easily accessible.

TERMS OF ADMISSION

Teachers and special students not seeking degrees are admitted to the courses of the Summer Session for which they are qualified.

The admission requirements for those who desire to become candidates for degrees are the same as for any other session of the University. Before registering, a candidate for a degree will be required to consult the Dean of the College in which he seeks a degree.

Graduates of accredited Normal Schools with satisfactory normal school records may be admitted to advanced standing in the College of Education. The objectives of the individual student determine the exact amount of credit allowed. The student is given individual counsel and advice as to the best procedure for fulfilling the requirements for a degree.

ACADEMIC CREDIT

The semester hour is the unit of credit, as in other sessions of the University. A semester credit hour is one lecture or recitation a week for a semester, which is approximately seventeen weeks in length. Two or three hours of laboratory or field work are counted as equivalent to one lecture or recitation. During the summer session a lecture course meeting five times a week for six weeks requiring the standard amount of outside work, is given a weight of two semester hours.

In exceptional cases, the credit allowance of a course may be increased on account of additional individual work. This must be arranged with the instructor at time of registration and approved by the Director.

Students who are matriculated as candidates for degrees will be credited towards the appropriate degree for satisfactory completion of courses.

Teachers and other students not seeking degrees will receive official reports specifying the amount and quality of work completed. These reports will be accepted by the Maryland State Department of Education and by the appropriate education authorities in other States for the extension and renewal of certificates in accordance with their laws and regulations.

ADVANCED FIRST GRADE CERTIFICATE

The courses for elementary school teachers are planned with special reference to the needs of teachers now holding the Maryland First Grade Certificate who wish to qualify by Summer School attendance for the Advanced First Grade Certificate. Both in subject matter and in treatment these courses are in advance of the courses required for the two-year normal school curriculum. Students desiring to work for the higher certificate will be given individual assistance in planning their programs not only for this summer session but also in anticipation of later sessions.

STUDENT SCHEDULES

Six semester hours is the standard load for the Summer Session. Students are strongly advised to limit themselves to the standard load. Special permission will be required for a program of more than six semester hours. (See also under expenses.) The program of every elementary school teacher should include at least one content course. Teachers should be careful not to elect courses that they have had in previous attendance at summer schools.

Regularly registered students who wish to attend a course or a part of a course without doing the work connected therewith are permitted to enroll as auditors with the consent of the instructor in charge and approval of the Director.

REGISTRATION

Wednesday, June 27th, is Registration Day. Students should register on or before this date and be ready for class work on the morning of Thursday, June 28th. It is possible to register in advance and reserve rooms by applying to the Director of the Summer School.

Students living in the vicinity may register in person Monday and Tuesday preceding the regular registration day.

Students may not register after Saturday, June 30th, except by special permission of the Director and the payment of a fee of $2.00 for late registration.

All course cards for work in the Summer School must be countersigned by the Director or Registration Adviser before they are presented in the Registrar's office.

When registration is completed each student should have a receipt for fees paid and class cards, one for each class.

A student desiring to withdraw from a course for which he has registered will apply to the Director for a withdrawal permit.

Unless otherwise stated, courses listed will be offered in 1934. In general, courses for which *less than five students apply* will not be given. Such

courses will be held open until the end of the first week, June 30th, at which time it will be determined by the Director whether they will be given.

SUMMER GRADUATE WORK

Special arrangements have been made for persons wishing to do graduate work in summer. The Master's degree represents full time work for one academic year. The minimum credit requirement is 30 semester hours in courses approved for graduate credits, including a thesis. The minimum residence requirement is attendance at four Summer Sessions. By carrying six semester hours of graduate work for four sessions and upon submitting a satisfactory thesis students may be granted the degree of Master of Arts or Master of Science. In some instances a fifth summer may be required in order that a satisfactory thesis may be completed. Teachers and other graduate students working for a degree on the summer plan must meet the same requirements and proceed in the same way as do students enrolled in the other sessions of the University. Those seeking the Master's degree as qualification for the State High School Principal's Certificate should include in their twenty-four semester hours approximately eight hours of "advanced study related to high school branches."

In a number of departments courses are scheduled for a series of years, thus enabling students whose major or minor subjects are in these departments, to plan their work in orderly sequence.

Full information in regard to general regulations governing graduate work may be had by writing to the Registrar for The Graduate School Announcements.

Certain special regulations governing graduate work in Education on the Summer plan are made available to students at time of registration. Each graduate student in Education should have a copy.

DORMITORIES

Students are accommodated in the University dormitories up to the capacity of the dormitories. The charge for rooms is as follows:

Silvester Hall (Men)	$ 8.00
Calvert Hall (Women)	8.00
Margaret Brent Hall (Women)	15.00

Rooms may be reserved in advance, but will not be held later than noon of Thursday, June 28th. As the number of rooms is limited, early application to the Director for reservations is advisable. Requests for room reservations must be accompanied with a deposit of $3.00. Checks should be made payable to *University of Maryland.* This fee of $3.00 will be deducted from charge for room rent when the student registers; *if he fails to occupy the room, the fee will be forfeited, unless application for refund is received by Monday, June 25th.*

The University dormitories will not be open for occupancy until the morning of June 27th.

Students attending the Summer School and occupying rooms in the dormitories will provide themselves with towels, pillows, pillow cases, sheets and blankets.

Trunks should be marked plainly with name and address (dormitory and room number) if rooms have been assigned in advance. Trunks are transported from the railroad station to dormitories by University trucks at a charge of 50 cents each. Trunks sent by express should be prepaid.

Students who prefer to room off the campus, or who cannot be accommodated in the dormitory, may find accommodations in boarding houses in College Park and in private homes in College Park and the nearby towns of Berwyn, Riverdale and Hyattsville.

The University, however, assumes no responsibility for rooms and board offered to summer session patrons outside of the University dormitories and dining room.

DINING HALL

Board is furnished at the College Dining Hall to all students desiring this service. Food is chosen and meals are planned with strict regard to health, nutrition and attractiveness. Milk is furnished by the University herd. Plenty of fresh fruits, vegetables and ice cream are found on all menus. Self-service is used in order to permit a wide choice of foods at minimum cost. Students so desiring may have meals at a flat rate of $40 for the six weeks. The dining hall will also be open for *a la carte* service to students not availing themselves of the reduced flat rate.

A Combination Plan provides Room and Board, at reduced rates as follows:

Board and Room in Silvester or Calvert Hall	$44.00
Board and Room in Margaret Brent Hall	50.00

EXPENSES

The special fees ordinarily required in higher institutions, such as registration fee, library fee, health service fee, and the like, are covered in the "General Fee" which is paid by all students.

General Fee (for all students)	$16.25
Board and Room	$44.00– 50.00
Room without Board	8.00– 15.00
Board without Room	40.00
Non-resident fee (for students not residents of Maryland or the District of Columbia)	10.00

The general fee of $16.25 entitles a student to the normal load of six semester hours. For each semester hour in excess of six, an additional fee of $4.00 will be charged.

Audition courses are charged at the same rate as courses taken for credit except that no charge is made to students who have paid the general fee for six semester hours. Consent of instructor concerned, however, should always be obtained.

Students may have a specified amount of laundry done at the University laundry at a flat rate of $4.00 for the session. Each article must be plainly marked with the name of the owner. Initials are not sufficient. Laundry will not be accepted unless so marked. The hours for putting in and taking out laundry are Friday from 1 to 4 P. M., and before noon Saturday.

A special fee, which is specified in the descriptions of certain courses, is charged for the use of laboratory and other materials.

One-half of the fees, including laundry and laboratory fees, must be paid upon registration, and the remainder at the beginning of the third week of the term.

Expenses of Graduate Students—The fees for graduate students are the same as for other students, except that the non-resident fee does not apply to graduate students.

REFUNDS

In cases of withdrawal for illness or other unavoidable causes, refunds will be made as follows:

For withdrawal within five days full refund of general fee and laboratory fees, with a deduction of $2.00 to cover cost of registration. Refunds for board, lodging and laundry will be pro-rated.

After five days, and up to two weeks, refunds on all charges will be pro-rated with the deduction of $2.00 for cost of registration.

After two weeks, refunds will be granted for board and laundry only, amounts to be pro-rated.

Applications for refunds must be made to the financial office and approved by the Director. No refund will be paid until the application form has been signed by the Director and countersigned by the dormitory representatives if the applicant rooms in a dormitory.

STUDENT HEALTH

The University Infirmary, located on the campus, in charge of the regular University physician and nurse, provides free medical service for the students in the Summer School. Students who are unwell should report promptly to the University physician, Dr. Leonard Hayes, either in person or by phone (Extension 12-day; Berwyn 328—night).

LIBRARY

The library provides ample accommodations both for undergraduate and graduate students. The main reading room has seats for 236 persons and shelves for 5,500 volumes. In the book stacks are 19 small alcoves with desks for graduate students. The total number of bound volumes is about 46,000 and there is a subscription list of over 420 periodicals and newspapers. The Library of Congress, the Library of the Office of Education and other libraries in Washington are available for references.

The library is open from 8.00 A. M. to 5.30 P. M., Monday to Friday, inclusive, and on each of these evenings from 6.00 to 10.00 P. M. On Saturday the hours are from 8.00 A. M. to 12.30 P. M. and on Sunday, 2.30 to 10.00 P. M.

PRIVATE INSTRUCTION IN MUSIC

Instruction in piano and voice under private teachers may be had by a limited number of students. Details may be secured from Mr. B. L. Goodyear of the Music Department.

ASSEMBLY PERIODS

A weekly assembly is held Wednesday at 11.10 A. M. All students are requested to attend regularly. This is the time when special announcements are made. It is the only time when it is possible to reach all students. The programs consist of addresses and music recitals.

SOCIAL EVENINGS

On Friday evenings during the session informal gatherings of students are held on the campus. The programs are varied. The hours from 8.30 to 11.00 are given over to various kinds of entertainments directed by student committees. A dramatic entertainment is generally given on the last Friday evening of the session. Community sings are held regularly once or twice a week from 6.00 to 7.00. Students are also given opportunity to engage in an evening recreation hour under the supervision of the Department of Physical Education.

EXCURSIONS

The vicinity of College Park holds a wealth of historic and geologic interests. Excursions may be arranged on Saturdays and at other convenient times to places of interest in Washington, to Mount Vernon, Great Falls and other places of interest in the neighborhood of the National Capital.

LECTURES AND RECITALS

A series of lectures and musical programs will be given during the session without additional charge. The schedule of programs and dates will be available at the time of registration.

STATE PARENT-TEACHER CONFERENCE

July 23-27

This conference is under the auspices of the Maryland Congress of Parents and Teachers, with the cooperation of the National Congress of Parents and Teachers and the University of Maryland.

For all those, teachers and parents alike, who are concerned with the difficult problems facing education in the United States this conference offers opportunity, during the week of July 23-27, for study of the Parent-Teacher movement.

The conference program will be devoted to two general topics: the aims, activities and procedures of Parent-Teacher organizations and an introduction to problems of parent education.

The programs will be under the direction of Mrs. Ross Coppage, President of the Maryland Congress of Parents and Teachers and Mrs. A. C. Watkins, Educational Secretary of the National Congress of Parents and Teachers.

DESCRIPTIONS OF COURSES

Designation of Courses

Courses with an S before the number, e. g., Ed. S. 11, are special Summer School courses and are not offered during the regular collegiate year.

Courses with an S following the number, as Psych. 103 S, are modifications, to meet Summer School conditions, of courses of the same number in the University catalogue.

Courses without the S, as Zool. 1, are identical with courses of the same symbol and number in the University catalogue.

Courses numbered 100 to 199 are for advanced undergraduates and graduates; courses numbered 200 and above are for graduate students only.

The symbols Eng., Ed., Agron., etc., refer to the departmental grouping under which such courses are found in the general catalogue.

The number of credit hours is shown by the Arabic numeral in parenthesis following the title of the course.

(Additional courses may be offered.)

AGRICULTURAL ECONOMICS

A. E. 107 S. FARM COST ACCOUNTING (3).—A. First three weeks (1½); B. Second three weeks (1½). 1.15-3.05, T-314. Lectures and laboratories. MR. HAMILTON.

A. The first part of the course will be devoted to the importance of keeping farm records; the relation of farm record keeping to the program of the Agricultural Adjustment Administration, and the actual setting-up and keeping of farm accounts.

B. The second half of the course will consist in analyzing and interpreting farm records. Records for about 150 Maryland farms of different types are available for detailed study and analysis.

A. E. 109 S. RESEARCH PROBLEMS (2).—DR. DEVAULT and MR. RUSSELL.

With the permission of the instructor, students will work on any research problems in agricultural economics which they may choose, or a special list of subjects will be made up from which the students may select their research problems. There will be occasional class meetings for the purpose of reports on progress of work, methods of approach, etc.

A. E. 203 S. RESEARCH AND THESIS (6-8).—For graduate students only. DR. DEVAULT.

Students will be assigned research work in Agricultural Economics under the supervision of the instructor. The work will consist of original investigation in problems of Agricultural Economics, and the results will be presented in the form of a thesis.

A. E. S. 211. TAXATION IN THEORY AND PRACTICE (2).—11.15, T-314. DR. DEVAULT and MR. WALKER.

Early history of taxation in this and other countries; development of modern tax supported services; trends in receipts and expenditures of governmental units; an analysis of the tax system of Maryland; theory of taxation—the general property tax, business and license taxes, the income tax, the sales tax, special commodity taxes, inheritance and estate taxes; recent

shifts in taxing methods and recent tax reforms. The specific relations of taxation to public education will be emphasized.

BACTERIOLOGY

BACT. 1. GENERAL BACTERIOLOGY (4).—Five lectures; five two-hour laboratories. 1.15, T-310. Lab., 8.15, T-307. Laboratory fee, $2.00. MR. FABER.

A brief history of bacteriology; microscopy; bacteria and their relation to nature; morphology; classification; metabolism; bacterial enzymes; application to water, milk, food and soil; relation to the industries and to disease. Preparation of cuture media; sterilization and disinfection; microscopic and macroscopic examination of bacteria; classification, composition and uses of stains; isolation, cultivation and identification of aerobic and anaerobic bacteria.

Individual adaptations will be made for advanced students to the extent that the facilities of the Department will permit.

BOTANY

BOT. 1 S. GENERAL BOTANY (4).—Five Lectures and five two-hour laboratory periods per week. Lecture 1.15, T-208; laboratory, 8.15, T-208. Laboratory fee, $2.00. DR. BAMFORD.

The chief aim in this course is to present fundamental biological principles rather than to lay the foundation for professional botany. The student is also acquainted with the true nature and aim of botanical science, its methods and the value of its results.

BOT. 2 S. GENERAL BOTANY (4).—Prerequisite, Bot. 1 S or equivalent. Five lectures and five two hour laboratory periods per week.—*Not given in 1934.*

A continuation of Botany 1. Typical plants of all the major groups are studied with special reference to their morphology, reproduction and life histories. Adaptation of plants to land habitat with the attendant changes in their anatomy and the evolution of the plant kingdom are also stressed.

BOT. 102 S. PLANT TAXONOMY (2).—Two lectures and three laboratory periods per week. To be arranged. DR. NORTON.

Classification of the plant kingdom and methods of taxonomic research in field, garden, herbarium and library. Each student will work on a special problem as a part of the laboratory work.

BOT. 204 S. RESEARCH IN MORPHOLOGY AND TAXONOMY (4-6).—To be arranged. DR. NORTON, DR. BAMFORD.

PLT. PATH. 205 S. RESEARCH IN PLANT PATHOLOGY (4-6).—To be arranged. DR. NORTON, PROFESSOR TEMPLE.

PLT. PHYS. 206 S. RESEARCH IN PLANT PHYSIOLOGY (4-6).—To be arranged. DR. APPLEMAN, DR. GREATHOUSE, DR. PARKER.

CHEMISTRY

For Undergraduates

CHEM. 1f. GENERAL CHEMISTRY (4).—Five lectures; five laboratories. *Not given in 1934.*

A study of the non-metals and the fundamental theories and principles of

chemistry. One of the main purposes of the course is to develop original work, clear thinking and keen observation.

CHEM. 1s. GENERAL CHEMISTRY (4).—Five lectures; five laboratories. Prerequisite, Inorg. Chem. 1f. Lecture, 9.15, DD-307. Labs. 1.20-4.20, DD-9. Laboratory fee, $4.00. DR. WHITE.

A continuation of Inorg. Chem. 1f in which the theories and methods of study are applied to the metals as well as non-metals.

CHEM. 2f. QUALITATIVE ANALYSIS (5).—Prerequisite, Chem. 1f and 1s. *Not given in 1934.*

A study of the reactions of the common metals and acid radicals, their separation and identification and the general underlying principles.

ANAL. CHEM. 4s. QUANTITATIVE ANALYSIS (2).—Prerequisite, Inorg. Chem. 1s. To be arranged. DR. WILEY.

The principal operations of quantitative analysis applied to gravimetric and volumetric methods.

ANAL. CHEM. 6f or s. QUANTITATIVE ANALYSIS (4).—Two lectures; three laboratory periods. Prerequisite, Chem. 1y. To be arranged. DR. WILEY.

The principal operations of gravimetric analysis. Standardization of weights and apparatus used in chemical analysis. The principal operations of volumetric analysis. Study of indicators, typical volumetric and colorimetric methods. The calculations of volumetric and gravimetric analysis are emphasized, as well as calculations relating to common ion effect. Required of all students whose major is chemistry. Laboratory fee, $6.00.

CHEM. 8s. ELEMENTARY ORGANIC CHEMISTRY (5).—Two lectures per day on Tuesday, Wednesday, Thursday and Friday. Laboratory equivalent to five three-hour periods per week. Lecture and laboratory to be arranged. DR. DRAKE.

This course is equivalent to Chem. 8f and 8s of the regular school year, and will satisfy the requirement in organic chemistry for pre-medical students. Laboratory fee, $6.00.

For Advanced Undergraduates and Graduates

CHEM. S. 100. SPECIAL TOPICS FOR TEACHERS OF ELEMENTARY CHEMISTRY (2).—Prerequisite, Inorg. Chem. 1s or equivalent. 11.15, T-112. DR. WHITE.

A study of the method of presentation and the content of a High School Chemistry Course. It is designed chiefly to give a more complete understanding of the subject matter than is usually contained in an elementary course. Some of the more recent advances in Inorganic Chemistry will be discussed.

CHEM. 117y. ORGANIC LABORATORY (2).—Laboratories equivalent to five three-hour periods per week. Lab. fee, $6.00. To be arranged. DR. DRAKE.

This course is devoted to an elementary study of organic qualitative analysis. The work includes the identification of unknown organic compounds, and corresponds to the more extended course, Chem. 207.

CHEM. 118y. ADVANCED ORGANIC LABORATORY (2).—Laboratories equivalent to five three-hour periods per week. Laboratory fee, $6.00. To be arranged. DR. DRAKE.

A study of organic quantitative analysis and the preparation of organic compounds. Quantitative determinations of carbon and hydrogen, nitrogen, and halogen are carried out, and syntheses more difficult than those of Chem. 8 By are studied.

CHEM. 102f. PHYSICAL CHEMISTRY (5).—Eight lectures; five laboratories. Prerequisite, Chem. 6y; Physics 2y; Math. 5s. To be arranged.

The gas laws, kinetic theory, liquids, solutions, elementary thermochemistry, colloids, etc.

CHEM. 102s. PHYSICAL CHEMISTRY (5).—Prerequisite, Phys. Chem. 102f. *Not given in 1934.*

A continuation of Phys. Chem. 102f. Equilibrium, chemical kinetics, electrolytic conductivity, electromotive chemistry, structure of matter, etc.

For Graduates

CHEM. 205s. ORGANIC PREPARATIONS (4).—A laboratory course devoted to the preparation of typical organic substances and designed for those students whose experience in this field is deficient. Laboratory equivalent to eight three-hour periods per week. Laboratory fee, $6.00. Consent of instructor. DR. DRAKE.

*CHEM. 212f. COLLOID CHEMISTRY (2).—Five lectures. 9.15, M., T., W., Th., F. DD-107. DR. HARING.

Theoretical applications.

*CHEM. 213f. PHASE RULE (2).—Five lectures a week. Prerequisite, Chem. 102f and s. DR. HARING.

A systematic study of heterogeneous equilibria. One, two, and three component systems will be considered with practical applications of each.

*CHEM. 214s. STRUCTURE OF MATTER (2).—Five lectures a week. Prerequisites, Chem. 102f and 102s. DR. HARING.

Subjects considered are radioactivity and vacuum tube phenomena, detection and separation of isotopes, and the Bohr and Lewis-Langmuir theories of atomic structure.

*CHEM. 215f. CATALYSIS (2).—Five lectures a week. Prerequisite courses, Chem. 102f and 102s. DR. HARING.

A study of the theory and practical applications of catalytic reactions.

CHEM. 221f. TISSUE ANALYSIS (3).—Eight laboratories. Prerequisite, Chem. 12f or its equivalent. Consent of instructor. To be arranged. Laboratory fee, $6.00. DR. BROUGHTON.

CHEM. 224s. RESEARCH (6).—The investigation of special problems and the preparation of a thesis towards an advanced degree. (THE CHEMISTRY STAFF.)

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* The one for which there is the greatest demand will be given.

DRAMATICS

DRAM. S 2. PLAY PRODUCTION FOR SCHOOLS (2).—11.15, L-300. DR. HALE.

Dramatic principle and education; play direction; acting; stage craft. Practical experience in the various phases of play production will be offered; plays will be analyzed and produced. Readings and reports; tests.

ECONOMICS AND SOCIOLOGY

Economics

ECON. 101 S. MONEY AND CREDIT (2).—8.15, T-314. MR. WEDEBERG.

A study of the origin, nature, and functions of money, monetary systems, credit and credit instruments, prices, interest rates, and exchanges.

ECON. S 159. COST ACCOUNTING (2).—9.15, T-314. MR. WEDEBERG.

The purpose of this course is to give a thorough training not only in the principles and methods of costing product, but also in the operation of industrial accounts. The course includes a very short, but comprehensive, practice set illustrating the basic principles of cost accounting.

See also A. E. S 211. Taxation in Theory and Practice, p. 13.

Sociology

SOC. 1S. PRINCIPLES OF SOCIOLOGY (2).—Sophomore standing. 8.15, T-310. MR. BELLMAN.

An analysis of the community and social institutions; processes and products of human interaction; the relation between society and the individual; social change.

SOC. 110 S. THE FAMILY (2).—Prerequisite, consent of instructor. 9.15, T-310. MR. BELLMAN.

Anthropological and historical backgrounds; biological, economic, psychological, and sociological bases of the family; the role of the family in personality development; family tension, maladjustment, and disorganization; family adjustment and social change.

See also Ed. S. 160. Juvenile Delinquency, p. 30.

EDUCATION

History and Principles of Education

ED. 2 S. PUBLIC EDUCATION IN THE UNITED STATES (2).—9.15, T-315. DR. BLAUCH.

A study of the origin and development of public education in the United States with the definite purpose of providing a background to aid in understanding public education today.

Text: "Public Education in the United States," Cubberley. (Houghton Mifflin.)

ED. S. 105. EDUCATIONAL SOCIOLOGY I (2).—10.15, T-205. DR. COTTERMAN.

School offerings as social control and emergent life; the coordination of school and life; personal interest and social discipline; growth service and

creative effort as self expression. Selected readings, investigations and reports.

ED. S. 106. EDUCATIONAL SOCIOLOGY II (2).—*Not given in 1934.*

Modern bases for the development of school programs; creative attitudes in school organization and in instruction; objectives in the American program of education; education as public policy and as social adjustment in France, Germany, England, Denmark, United States, and in other countries. Selected readings, investigations and reports.

ED. S. 114. FOUNDATIONS OF METHOD (2).—10.15, S-1. MR. BROOME.

This course will be devoted to the examination of problems of method in the light of the more recent work in psychology, the social sciences and the philosophy of education. This course is open only to normal school graduates and to students who have the equivalent, in experience and summer school study, of normal school graduation or the equivalent in college work.

ED. S. 116. CURRENT PROBLEMS IN THE ADMINISTRATION OF INSTRUCTION (2).—9.15, S-1. MR. BROOME.

This course will survey the major conflicting theories and practices of present-day education in order to consider critically the related problems in administration and management. The course will deal with administration from the angle of the whole child. Normal school graduation or equivalent is a prerequisite for the course. Texts and references to be assigned.

ED. S. 117. HEREDITY AND EDUCATION (2).—8.15, T-315. DR. KEMP.

This course includes consideration of the early views of inheritance of characters; the Mendelian principle and the mechanism underlying it; simple application in plants, in animals, and in men; variability and individual differences; eugenics; educational implications.

ED. S. 118. STATISTICAL METHOD (2).—9.15, T-112. DR. KEMP.

An introduction to statistical method. Material for illustration is drawn from the field of education. Specific topics treated are: tabulation, plotting and graphic presentation of data; measurement of central tendency; measurement of dispersion; correlation or measures of relationship; regression; error; limitations of statistical analysis.

ED. S. 119. ADVANCED STATISTICAL METHOD (2).—10.15, T-314. DR. KEMP.

Prerequisite, an introductory course in statistics or its equivalent.

This course includes use of partial correlation; multiple correlation; multiple regression; goodness of fit; and analysis of variance.

ED. S. 140. THE PRINCIPLES OF SUPERVISION (2).—8.15, L-107. MISS LASALLE.

This course is designed primarily for principals of elementary schools and junior high schools. It will deal with the general principles and problems involved in supervision—its purposes, functions and methods. Standards for judging teaching procedures, judging growth of pupils and teachers, development of morale; types of conferences, observations, demonstrations and supervisory reports will be considered.

Text: "Supervision of Instruction," Barr and Burton. (Appleton.)

ED. S. 170. RADIO EDUCATION (2).—8.15, S-101. DR. TYLER.

This course is designed for those who wish to study the use of radio as an educational and cultural agency. Attention will be devoted to the history of the radio education movement in the United States and in other countries; organizations working in the radio education field; the problems involved in the use of radio in connection with classroom work; the present status of educational radio programs; the problems brought to the home by the advent of radio; the future of radio, and particularly of radio education, and the responsibility and concern of educators for that future.

ED. S. 209. PUBLIC EDUCATION IN MARYLAND (2).—1.15, EE-205. DR. BLAUCH.

This course is designed for students who plan to write theses involving historical and documentary research and for others who desire training in this form of research. It begins with exposition of the methods of such research. This is followed by a study of educational development in Maryland. The class work is completed in the first three weeks. The second three weeks is devoted to individual studies and the writing of term papers.

Text: "How to Write a Thesis," W. G. Reeder. (Public School Publishing Company.)

ED. S. 212. PROBLEMS OF PUBLIC EDUCATION (2).—8.15, T-205. DR. BLAUCH.

This course attempts a critical survey of the urgent problems of public education in the United States in the light of historical backgrounds and present social trends.

See also A. E. S 211. Taxation in Theory and Practice, p. 13; and Ed. S 160. Juvenile Delinquency, p. 30.

Psychology

ED. PSYCH. 4f. EDUCATIONAL PSYCHOLOGY (3).—Seven periods a week. Daily, 9.15; in addition, Th. and F., 10.15, Q-104. MR. DOUGLAS.

General characteristics and use of original tendencies; principles of mental development; the laws and methods of learning, forgetting, transfer of training; experiments in rate of improvement; permanence and efficiency; causes and nature of individual differences; principles underlying mental tests; principles which should govern school practices.

ED. PSYCH. 106S. ADVANCED EDUCATIONAL PSYCHOLOGY (2).—Prerequisite, Ed. 4f or equivalent. *Not given in 1934.*

An intensive study of motivation, intelligence and mental adjustment.

ED. PSYCH. 108 S. MENTAL HYGIENE (2).—Five lectures a week and one observation period at St. Elizabeth's Hospital. Prerequisite, Ed. Psych. 4f or equivalent. 10.15, T-315. DR. SPROWLS.

The aim of this course is to acquaint teachers, school administrators and social workers with the applications of mental hygiene to the school and to other educational factors in the environment of school children.

Text: "Keeping A Sound Mind," Jno. J. B. Morgan. (Macmillan.)

ED. PSYCH. S. 111. THE DEVELOPMENT OF PERSONALITY AND CHARACTER (2).—9.15, L-107. MISS LASALLE.

This course will consider the psychological basis of conduct; the outstanding physical, social and emotional factors that influence personality

and character; the typical home, school and life discipline situations and the place of punishment; the underlying principles of an effective program of personality development and character education; and a critical examination and evaluation of outstanding school plans of character education now in use.

Text: "Character Education," Department of Superintendence 10th Year Book, N. E. A.

Text: "Human Nature and Conduct," John Dewey. (Holt.)

ED. S. 200. ADVANCED EDUCATIONAL AND MENTAL MEASUREMENTS (2).—11.15, T-301. DR. CARROLL.

For supervisors, actual and prospective; for educational counsellors; and for high school teachers. Not open to undergraduate students except by permission.

This course will deal principally with educational tests and will treat their selection, adaptation, construction, standardization, uses and limitations.

ED. S. 201. PSYCHOLOGY OF ADOLESCENCE (2).—For graduate students. 10.15, T-301. DR. CARROLL.

This course deals with the major trends of adolescence such as the urge for freedom, the sex trend, social trend, work trend, finding the larger self, etc. These will be considered with emphasis on the implications for education.

Text: "Psychology and Problems of Adolescence," Fowler D. Brooks. (Houghton Mifflin.)

See also H. E. Ed. 102S. Child Study, p. 23, and Psych. S121. Social Psychology of Contemporary American Life, p. 39.

RURAL AND AGRICULTURAL EDUCATION

R. ED. S. 106. RURAL LIFE AND EDUCATION (2).—*Not given in 1934.*

Changing rural communities; changing rural schools; developments in adult education; present day governmental policy and education; the rural church as social and cultural education; the Grange as economic and social history; rural municipalities and civic federations; evolution of rural life in America; ancient and foreign rural communities; the good life as the motive in development; rural communities in relation to natural resources; norms of living; mission of education at the crossroads.

R. ED. S. 201. COMPARATIVE RURAL AND AGRICULTURAL EDUCATION (2). —*Not given in 1934.*

State and national programs of rural and agricultural education are examined and evaluated from the standpoint of living in rural communities. Offerings, objectives and administrative organization receive particular attention. The course deals with conditions not only as they are found in the United States but in Canada, England, Denmark, Finland and other countries.

R. ED. S. 202. TEACHING VOCATIONAL AGRICULTURE AND RELATED SCIENCE (2).—9.15, FF-18. DR. COTTERMAN.

In this course particular attention is placed upon the selection, integration and organization of subject matter in units most convenient for the realization of the objectives now confronting vocational teachers. It is designed especially for persons who have had several years of teaching

experience in this field. Organization of work is considered from the standpoint of all-day, part-time and adult classes. Surveys of subject matter content of the several phases of vocational agriculture and related science are made with the view of constructing units which will be of immediate value in the classroom to teachers taking the course. Students planning to take this course should bring with them their subject matter outlines, some of their textbooks, as well as books dealing with the larger unit concept in teaching, particularly "The Practice of Teaching in the Secondary School," by Morrison, and "A Program for Teaching Science," 31st Yearbook, Part 1, National Society for the Study of Education. Any text dealing with the objectives of techniques of vocational education, particularly agricultural education, will also be found helpful.

R. ED. S. 203. CHANGING RURAL EDUCATION (2).—*Not given in 1934.*

The changing emphases and recent developments in rural education receive special attention in this course. All levels of school work are considered—elementary, secondary, higher, extension and adult education. Current reports of the several national bodies which deal with these problems are reviewed and evaluated. The findings of the class as a whole are summarized as trends insofar as the nature of these findings will permit. Current developments are emphasized.

R. ED. S. 250. SEMINAR IN RURAL AND AGRICULTURAL EDUCATION (2).—*Not given in 1934.*

In this course students are assigned problems of investigations of particular interest to them in any of the phases of rural and agricultural education in which they may have special interest. Investigations, reports and special papers are critically analyzed and evaluated. The course is designed especially for those who plan to prepare a graduate thesis in the fields of Agricultural Education, Rural Education or Educational Sociology.

R. ED. S. 251. RESEARCH (2-4).—Credit given according to work done. DR. COTTERMAN.

Students must be especially qualified by previous work to pursue with profit the research to be undertaken.

See also Ed. S. 105. Educational Sociology, p. 17.

SECONDARY EDUCATION

ED. S. 29. ART WORK FOR THE HIGH SCHOOL (2).—9.15, Q-300. MISS KERR.

This course is designed for teachers in small high schools where Art is being introduced. Special attention will be given to materials, necessary equipment and practical application of Art principles in the home.

ED. 103 S. PRINCIPLES OF SECONDARY EDUCATION (2).—Graduate credit by special arrangement. 8.15, T-301.

The development of secondary education in America; aims and functions of secondary education; equipment of secondary school teacher; social and economic composition of secondary school; physical and mental characteristics; comparative secondary education; reorganization tendencies; curriculum objectives.

Text: "Principles of Secondary Education," Douglass. (Houghton Mifflin.)

ED. 110 S. THE JUNIOR HIGH SCHOOL (2).—9.15, T-219. MR. PYLE.

A study of the origin and special purposes of the junior high school. Organization, administration and supervision. Curricula, program making, classification of pupils, pupil guidance.

ED. 126 S. SCIENCE IN THE HIGH SCHOOL (2).—Graduate credit by special arrangement. 10.15, S-204. DR. BRECHBILL.

Objectives of science in secondary schools; selection of subject matter; method of class period; lesson plans; unit organization as applied to general science.

Note: Students planning to take this course are asked to bring with them any texts in high school science they may have.

ED. 128 S. MATHEMATICS IN THE HIGH SCHOOL (2).—Graduate credit by special arrangement. 11.15, S-204. DR. BRECHBILL.

Objectives of mathematics in secondary schools; selection of subject matter; State requirements and State Course of Study; proposed reorganizations; psychological principles underlying the teaching of mathematics in secondary schools; lesson plans and devices for motivating work.

ED. S. 145. CONTEMPORARY SECONDARY EDUCATION IN EUROPE (2).—11.15, T-310. DR. LONG.

A survey of recent changes in secondary education in England, Italy, Germany, France and Russia. Significant changes in other European countries will be covered in supplementary work.

ED. S. 202. ADMINISTRATIVE PROBLEMS OF THE HIGH SCHOOL PRINCIPAL (2).—10.15, T-219. MR. PYLE.

A study of the vital problems of high school administration resulting from decreased school revenues and from changing social and economic conditions. The course will be concerned chiefly with the smaller high schools. Attention will be given to desirable ends in secondary education and to the guiding principles in administrative practice. Members of the class will be encouraged to submit concrete problems as bases for individual study.

Texts: "Principles of Secondary Education," Cox and Long. (Heath.) "The Smaller Secondary Schools," Bulletin, 1932. No. 17. Monograph No. 6. (Department of the Interior, Office of Education.)

ED. S. 203. SUPERVISORY PROBLEMS OF THE HIGH SCHOOL PRINCIPAL (2).—Graduate students only. *Not given in 1934.*

This course deals with the function, problems and technique of the supervision of instruction in the high school. The following major topics are considered: the aims and standards of the high school; the purpose of supervision; supervisory visits and conferences; evaluation of types of class room procedure and of instructional methods and devices; selection and organization of subject matter; the psychology of learning; marks and marking systems; economy in the class room; rating teachers; evaluating the efficiency of instruction; achievement tests as an aid to supervision.

ED. S. 205. CURRICULUM PROBLEMS IN SECONDARY EDUCATION (2).— For graduate students only. 11.15, T-219. MR. PYLE.

A study of the vital curriculum problems in secondary schools. The course includes a survey of recent studies, descriptive and critical, of curriculums and curriculum making; a critical study of the Cardinal Principles as curriculum guides in the changing social conditions; and special consideration of the curriculum problems of the medium and smaller high schools.

No text is assigned but much use will be made of Monographs 18-28, inclusive, of the National Survey of Secondary Education (Bulletin 17. Office of Education) and of Briggs' "Secondary Education." (Macmillan.)

ED. S. 222. THE SHORT STORY IN THE HIGH SCHOOL ENGLISH COURSE (2).—9.15, S-204. MISS SMITH.

The short story, in form and subject matter, is studied as a reflection of individual and social ideals. The contributions of the French, English and Russians are briefly surveyed. The chief emphasis is on the American Short Story. Attention is given to selection and organization of material for teaching purposes.

ED. S. 223. THE UNIT CONCEPT IN TEACHING HIGH SCHOOL SUBJECTS (2).—8.15, S-204. MISS SMITH.

Survey of the principles of selecting and organizing subject matter in the high school academic subjects; critical study of the essential differences in the material of instruction of the several high school academic subjects; evaluation of appropriate teaching procedures, with special reference to adaptations and limitations of the Morrison unit concept as applied to specific subject matter fields.

Text: "The Practice of Teaching in the Secondary School," Morrison. (University of Chicago Press.)

See also Mus. Ed. S. 3, Mus. Ed. S. 10, Mus. Ed. S. 12, Mus. Ed. S. 13, pp. 37, 38, 39; and Chemistry S. 100, p. 15.

HOME ECONOMICS EDUCATION

H. E. ED. 102 S. CHILD STUDY (2-3).—10.15, T-112. MISS MCNAUGHTON.

The study of child development in relation to the physical, mental, and educational phases of growth; study of textbooks and magazines; observation of children in nursery school; adaptation of material to teaching of child care in high school. Additional credit given for work in Nursery School.

H. E. ED. 102 S-A. NURSERY SCHOOL PRACTICE (1)—Practice House. MISS MCNAUGHTON.

The University Nursery School maintained during the summer session affords opportunity for both observation and practice. Students who enroll in Child Study or who have taken this course in former years may register for the course in Nursery School Practice and schedule one hour daily between 9 A. M. and 12 M.

H. E. ED. 200 S. SEMINAR IN HOME ECONOMICS EDUCATION (2).—8.15, T-112. MISS MCNAUGHTON.

Adaptation of home economics to the present needs; selection of problems; teaching of principles through the problem method; evaluation of illustrative material and of textbooks; unit construction.

INDUSTRIAL EDUCATION

IND. ED. S. 35. ELECTRO CRAFT (4).—Three periods daily, one period for lecture and discussion; two periods for individual shop work. 1.15-4.05, T-48. A laboratory fee of $4.00 is charged for material. MR. BALSAM.

This course is organized to meet the needs of persons who wish to prepare themselves to teach electricity in Departments of Industrial Education of junior and senior high schools.

Instruction will be given in the theory and practice of electrical construction as applied to various types of bells, light, motor and generator circuits. Practice will be given in electric wiring, splicing, soldering, taping and fusing of wire; the wiring of circuits, switches, and other electrical appliances; the use of armored cable, metal molding, flexible and rigid conduit. Lectures will be given on trade methods, underwriters' rules, and electricity.

It is suggested that all persons who are planning to enroll in this course bring with them to the summer school the following tools: hammer, saw, screw drivers (small and medium), brace, wire-cutting pliers, awl, knife, soldering copper, small adjustable wrench and several files.

IND. ED. S. 36. DECORATIVE METAL WORK, INCLUDING COPPER AND SILVERSMITHING AND JEWELRY WORK (4).—9.15-12.05, Q-102. Three periods daily, one period for lecture and discussion; two periods for individual shopwork. A laboratory fee of $4.00 is charged for material. MR. LONGLEY.

Most everyone, young or old, has the desire to create and make something beautiful and worthwhile with his hands, and to meet this end, probably no work is better suited than that in copper, brass, pewter, or silver.

This course aims to teach the operations and methods used in this work to industrial arts and crafts teachers, camp councilors and instructors, hobby club advisers, home craft shop promoters, men and women interested in art and design, and anyone interested in developing an interesting and profitable pastime for leisure hours.

The chief operations taught in the course are spotting, drilling, saw piercing, pattern layout and transfer, filing, finishing by buffing and polishing or coloring (oxidizing), hammering (trays), annealing, pickling, etching, enameling, seaming, soldering, embossing (repouseé and chasing), wire drawing, raising shallow bowls, raising deep bowls, and planishing.

IND. ED. S. 112. METHODS OF TEACHING MECHANICAL DRAWING (2).—10.15, FF-103. MR. SEIDEL.

This course is offered for teachers of Industrial Arts who are interested in developing an effective course of mechanical drawing for high school students. The necessary methods and techniques for teaching large groups will be developed. Teaching aids for developing skill and a high standard of work will be stressed.

IND. ED. S. 113. SELECTION AND ORGANIZATION OF RELATED SUBJECT MATTER MATERIAL FOR INDUSTRIAL COURSES (2).—9.15, FF-103. MR. SEIDEL.

This course will be conducted on the conference basis. All possible available related subject matter material will be assembled, appraised, and organized in the proper teaching sequence. Since the teaching of related subject matter is so important, yet somewhat new to progressive shop teachers, it is hoped that this course will offer an opportunity to interested individuals in solving some of the problems of teaching this new subject matter in shop courses.

IND. ED. S. 115. THE RISE AND DEVELOPMENT OF INDUSTRY (2).—11.15, Q-203. MR. LELAND.

This course is designed to give an appreciation and understanding of the origin and development of our modern industrial civilization. Among the topics to be discussed are the following: Laying the Foundation of Industry; The Pastoral Stage of Industry; Early Agricultural Stage of Industry; Industry of the City State; The Economic Empire of the Ancient World; The Function and Structure of Mediaeval and Industrial Society; The Beginnings of Capitalists; Agriculture and Manufacture; The Rise of the Modern Organization of Trade and Commerce; The Industrial Revolution; The Rise of the Machine Industry.

COMMERCIAL EDUCATION

ED. S. 132. PRINCIPLES OF COMMERCIAL EDUCATION (2).—9.15, N-101. MR. EDGEWORTH.

This course is for those preparing for, and those now in, the Commercial teaching field. The course will consider the principles and history of Commercial Education, Commercial curriculum making, adjustment of a program of Commercial Education to the principles of general education, and will deal with some of the problems of adjusting the program of Commercial Education to meet community needs, teaching materials, tests and standards in Commercial subjects.

ELEMENTARY EDUCATION

ED. S. 32. THE PRIMARY SCHOOL: PRINCIPLES AND METHODS IN THE TEACHING OF KINDERGARTEN-PRIMARY ACTIVITIES (2).—8.15, T-311. MRS. SIBLEY.

This course aims to set up criteria for evaluating activities in the kindergarten-primary grades; to survey and analyze the experiences and interests of children, and to utilize local environment as a basis for work in history, nature study, geography, and science. Due consideration will be given the related skills, reading, language, writing and spelling. Integration of the activities and the classroom subjects will be particularly emphasized.

ED. S. 33. ARITHMETIC IN THE PRIMARY GRADES (2).—10.15, T-311. MISS DEVORE.

This course deals with the goals of achievement, organization and presentation of subject matter according to gradation of difficulties, types of drill, uses of tests, test determined instruction and evaluation of teaching procedures.

Much use will be made of the Maryland School Bulletin, "Arithmetic Goals."

Text: "Teaching Arithmetic in the Primary Grades," Morton. (Silver Burdette.)

ED. S. 34. SOCIAL STUDIES IN THE PRIMARY GRADES (2).—11.15, T-311. MISS DEVORE.

This course deals with the goals of the social studies; organization and presentation of units of subject matter; criteria for judging the worthwhileness of a unit, activities and materials involved; unification of the curriculum versus conventional subject division plan. The following units will be considered: Community Helpers, Shelter, Food, Clothing, Transportation, Primitive Life, Celebration of Holidays.

The following bulletins from the Maryland State Department of Education will be used: "The Teaching of Citizenship in the Elementary School" and "Goals in Social Studies for Primary Grades I-III."

Text: "The Social Studies in the Primary Grades," Storm. (Lyons and Carnahan.)

ED. S. 35. LITERATURE IN THE PRIMARY GRADES (2).—9.15, T-311. MRS. SIBLEY.

This course aims to develop standards of judgment in selecting literary materials for primary grades. Emphasis will be placed on the types of material suited to different age levels. Consideration will be given to the place and function of Mother Goose, folk and fairy tales; fables, myths, and legends; the fanciful and realistic stories; and poetry in the development of the child. Dramatization, story telling, and creative work with children will be included.

ED. S. 45. FINE AND MANUAL ARTS FOR PRIMARY GRADES (2).—11.15, Q-300. MISS KERR.

This course is designed primarily for teachers of village and rural schools. The units of work given in the Primary Grades are used as a basis for the course. Free hand cutting, paper folding, construction work, free illustration and seasonal work are used to develop the child's mental and physical coordination. Aims, materials, method, and expected outcome. Conducted as a demonstration class.

ED. S. 46. FINE AND MANUAL ARTS FOR UPPER GRADES (2).—8.15, Q-300. MISS KERR.

This course is planned for the four upper grades. Art as a medium of expression for other school subjects developed through illustration, lettering, poster making, and craft work. Lesson plans, materials, procedure, outcomes are given. Conducted as a demonstration class. Open to students who have had some preparation in the subject and to those who are teaching upper grades.

ED. S. 50. ORAL AND WRITTEN COMPOSITION IN THE UPPER ELEMENTARY GRADES (2).—10.15, FF-204. MR. PHIPPS.

The course is designed so that the usually accepted objectives in oral and written expression, and grammar in the upper elementary grades may have more meaning and a more worthwhile use. To this end the method will be based on an intelligent use of a textbook in composition and grammar. The aim throughout the course will be to show the close relationship between the rich and vital subject matter which children experience in their content subjects and written and oral expression. Emphasis will be placed upon the

organization of materials to accomplish the goals as stated in the Maryland Schools Bulletin, "Goals of Achievement in English."

Text. "Speaking and Writing English," Manual for Teachers, Revised Edition, Bernard Sheridan. (Sanborn.)

ED. S. 51. READING IN THE UPPER ELEMENTARY GRADES (2).—11.15, FF-204. MR. PHIPPS.

This course deals with the principles underlying the teaching of reading of both the work type and the recreatory type; the general interests of children on the various age and grade levels; the selection of materials to meet the needs and interests of upper grade children; the growth of vocabulary; the development of "the reading habit"; the relation between the teaching of reading and teaching how to study the other content subjects; and the use of informal tests. Special emphasis will be given to methods of diagnosing pupil difficulties, and to the use of corrective exercises for the improvement of important phases of oral and silent reading skills.

Each student is requested to bring the Course of Study used in her reading work, the basal reading texts for her grade or grades, and the Maryland Schools Bulletin—"Silent Reading."

ED. S. 52. LITERATURE IN THE UPPER ELEMENTARY GRADES (2).—9.15, FF-204. MR. PHIPPS.

This is a content course, the purpose of which is to enrich the background for the teaching of Literature and Reading in these grades. An attempt will be made to help teachers discriminate between what is poetry and what is not poetry; to bring them to a richer understanding as to the purpose of poetry; to help them select poetry suitable for their pupils; and to help them in their presentation and interpretation of poetry in the classroom.

There is no text for the course. Teachers are requested to bring, if possible, at least one anthology of modern poetry.

ED. S. 55. ARITHMETIC IN THE UPPER ELEMENTARY GRADES (2).—11.15, Q-104. MR. DOUGLAS.

This course has for its major aim the enrichment of the topics ordinarily taught in the upper grade arithmetic. The procedure includes a survey of the historical development of the subject and study of the principles of selecting, organizing and presenting the subject matter appropriate for these grades.

Text: "An Arithmetic for Teachers," Roantree and Taylor. (Macmillan.)

ED. S. 57. GEOGRAPHIC SCIENCE FOR ELEMENTARY AND JUNIOR HIGH SCHOOL TEACHERS (2).—9.15, FF-104. MR. DIEHL.

This is a content course which has been systematically and scientifically organized around the major geographic topics presented in the Maryland School Bulletin on Science. As the subject matter is developed and professionalized, its grade allocation and possible organization for teaching units will be emphasized. Excursions and field trips will form an important part of this course.

This course is designed primarily for teachers in elementary and junior high school and is introductory and non-technical in character.

Students who are planning on taking this course are requested to bring with them the Maryland School Bulletin on Science and any other available reference materials on the geography topics contained therein.

See also Music, p. 37.

PHYSICAL EDUCATION

PHYS. ED. S. 46. CLOG AND FOLK DANCING (Material Summary) (2).—9.15, Girls' Field House. MISS PHILLIPS.

This course will aim to present material suitable for teaching clog and folk dancing in the Junior and Senior High School. The material presented will be adapted to the needs and problems of the class.

PHYS. ED. S. 48. NATURAL ACTIVITIES FOR THE JUNIOR AND SENIOR HIGH SCHOOL (2).—11.15, Girls' Field House. MISS PHILLIPS.

The aim of this course will be to present the fundamentals of natural activities such as self testing activities, stunts, tumbling and pyramid building which are suitable for the Junior and Senior High School. Both theoretical and practical work will be offered.

PHYS. ED. S. 104. GAMES (2).—10.15, Girls' Field House. MISS PHILLIPS.

This course will aim to present material which is suitable for the teaching of games in the Elementary and Junior High School. Both theoretical and practical work will be offered and methods of teaching will be considered.

PHYS. ED. S. 13 A. METHODS OF COACHING HIGH SCHOOL ATHLETICS (2).—8.15, Gym. MR. SPEIR.

This course is intended to help the teacher who must coach in addition to his other duties as a teacher. Special emphasis will be placed upon soccer, track and other spring sports sponsored by the Playground Athletic League.

PHYS. ED. S. 13 B. METHODS OF COACHING HIGH SCHOOL ATHLETICS (2).—*Not given in 1934.*

This course places special emphasis on interscholastic football, baseball and basketball.

PHYS. ED. S. 21. FUNDAMENTAL CONCEPTIONS OF PHYSICAL EDUCATION (2).—8.15, Gym. MR. MACKERT.

This course aims to present the materials of Physical Education that are important in the education of boys and girls with which every school person should be familiar.

PHYS. ED. S. 23. AN INTRODUCTION TO PHYSICAL EDUCATION (2).—*Not given in 1934.*

This course studies the various theories of Physical Education and attempts to orient the individual in the study of Physical Education as a profession.

PHYS. ED. S. 25. THE PHYSIOLOGY OF PHYSICAL ACTIVITY (2).—10.15, Gym. MR. MACKERT.

The aim of this course is to present the physiological facts which are basic

to the acquisition and appreciation of skill and efficiency in Physical Education.

PHYS. ED. S. 27. THE PSYCHOLOGY OF PHYSICAL ACTIVITY (2).—*Not given in 1934.*

This course aims to apply the psychological data in the field of education to the activities of Physical Education.

PHYS. ED. S. 29. CURRICULUM MAKING IN PHYSICAL EDUCATION (2).—9.15, Gym. MR. SPEIR.

This course attempts an educational analysis to determine the best practices in building a curriculum for Physical Education.

PHYS. ED. S. 31. THE ADMINISTRATION OF PHYSICAL EDUCATION (2).—*Not given in 1934.*

This course is designed to acquaint the student with the best procedures in the organization and administration of Physical Education.

PHYS. ED. S. 33. HEALTH TEACHING IN THE PUBLIC SCHOOLS (2).—11.15, Gym. MR. SPEIR.

A survey of the materials and methods for teaching health in the public schools. Correlated with the State syllabus, "Science in the Elementary Schools."

PHYS. ED. S. 35. THE ORGANIZATION AND ADMINISTRATION OF HEALTH EDUCATION (2).—*Not given in 1934.*

This course is designed to acquaint the student with the best procedures in the organization and administration of health education programs for public schools.

PHYS. ED. S. 37. METHODS OF TEACHING PHYSICAL EDUCATION (2).—11.15, Gym. MR. MACKERT.

In this course the methodology of teaching Physical Education is applied in a wide variety of situations with practical suggestions to meet the everyday problems that teachers face.

PHYS. ED. S. 39. PROBLEMS OF HEALTH AND PHYSICAL EDUCATION (2).—*Not given in 1934.*

This course is intended to give the student aid in the selection and solution of special problems. The fields of Educational Hygiene and Physical Education will be surveyed for possible material. The student works on particular problems that he wishes to organize in his local situation.

Special Notice: Graduate credit will be granted in courses Phys. Ed. S. 13B-Phys. Ed. S. 39, inclusive, if the student is properly qualified and does a satisfactory amount and grade of work in addition to the undergraduate requirements. After consultation with the Head of the Department of Physical Education, the graduate student will register for the above courses in the following manner: S 13A-S 113A; S 13B-S 113B; S 21-S 121; S 23-S 123; S 25-S 125; S 27-S 127; S 29-S 129; S 33-S 133; S 35-S 135; S 37-S 137; S 39-S 139.

SPECIAL EDUCATION AND JUVENILE DELINQUENCY

ED. S. 150. INTRODUCTION TO SPECIAL EDUCATION (2).—9.15, Q-203. MISS GRIMES.

This course aims to help the special class teacher, the regular class

teacher, supervisors, elementary school principals, attendance officers, and social workers to a better understanding of the problems and principles involved in properly identifying, educating, training, placing in employment, and following up physically and mentally handicapped children.

ED. S. 151. PSYCHOLOGY OF HANDICAPPED CHILDREN (4).—*Not given in 1934.*

Prerequisite Ed. S. 150 or equivalent. With the special permission of the instructor these two courses may be taken concurrently.

It is the aim of this course to give the student an introduction to Clinical methods and procedures employed in the differential diagnosis of handicapped children. The course will afford an opportunity to study and to practice the administration of certain physical, psychological, and educational tests. Emphasis, however, will be placed upon the interpretation of test results and supporting data; and to methods of applying to the individual child the remedial measures indicated.

ED. S. 152. METHODS OF SPECIAL EDUCATION (2).—8.15, Q-203. MISS GRIMES.

This course, one of a series of three designed primarily for teachers, will be concerned with Unit work. Practice will be given in developing units of work. Emphasis will be placed on integrating and correlating Reading, Arithmetic, Language and other school subjects with Science, as outlined in the State bulletin, "Science in the Elementary Schools."

ED. S. 160. JUVENILE DELINQUENCY (2).—8.15, T-219. MR. GERLACH.

This course deals with the nature, extent and causes of delinquency; the individual delinquent; treatment of delinquency; and prevention of delinquency. The relation of the school to the problem of delinquency is given careful consideration.

A mimeographed syllabus of the course containing outline, bibliography, problems, cases and other illustrative material will be used as a text.

ENGLISH

ENG. 1ys. COMPOSITION AND RHETORIC (3).—Eight periods. 10.15 daily; 11.15 M., W., F., L-302. DR. HARMAN.

The second semester of the Freshman Composition and Rhetoric Course.

Parts, principles, and conventions of effective thought communication. Reading, study, and analysis of standard contemporary prose specimens. Original exercises and themes.

ENG. 3 S. ADVANCED COMPOSITION AND RHETORIC (2).—Prerequisite, Eng. 1y or equivalent. 9.15, L-202. DR. HALE.

Lectures on the English Language and the principles of rhetoric. Drill in theme writing. The equivalent of the first semester of Eng. 3-4. (See general catalogue.)

ENG. 4 S. ADVANCED COMPOSITION AND RHETORIC (2).—Prerequisite, Eng. 1y or equivalent. *Not given in 1934.*

A continuation of Eng. 3S and an equivalent of the second semester of Eng. 3-4. (See general catalogue.)

ENG. 7 S. HISTORY OF ENGLISH LITERATURE (2).—9.15, L-302. DR. HARMAN.

A general survey from the beginning to about 1500.

ENG. 8 S. HISTORY OF ENGLISH LITERATURE.—*Not given in 1934.*

A general survey from about 1500 to the present time.

ENG. 105 S. B. POETRY OF THE ROMANTIC AGE (2).—10.15, L-202. DR. HALE.

A study of the Romantic Age as exemplified in the works of Byron, Shelley and Keats.

ENG. 122 S. THE NOVEL (2).—9.15, L-300. DR. HOUSE.

Lectures on the novel and novelists. Class reports on standard works, chiefly from English and American sources.

ENG. 127 S. VICTORIAN POETS (2).—10.15, L-300. DR. HOUSE.

Studies in the poetry of Browning, Arnold, Clough, Swinburne, and others. The equivalent of the second semester of Eng. 126-127. (See general catalogue.)

ENG. 129 S. COLLEGE GRAMMAR (2).—8.15, L-300. DR. HOUSE.

Studies in the descriptive grammar of Modern English, with some account of the history of forms.

ENG. 132 S. CONTEMPORARY DRAMA (2).—8.15, L-302. DR. HARMAN.

More recent dramas, chiefly English and American.

ENTOMOLOGY

ENT. 1 S. INTRODUCTORY ENTOMOLOGY (3).—Five two-hour periods a week, used as lectures, discussions, laboratories, and short excursions. Lec. 11.15, L-202; Lab. 10.15, L-206. MR. KNIGHT.

The relation of insects to human welfare. General principles of insect life, especially development, growth, structure, classification, behavior, and control. Interesting as well as economically important insects are studied. Teaching aids are given in connection with each division of the subject, in order that the course will be of value to the teacher of nature study or biology. Outside readings to supplement the work done in class.

For Graduate Students

ENT. 201. ADVANCED ENTOMOLOGY (2).—Hours to be arranged. DR. CORY.

Studies of minor problems in morphology, taxonomy and applied entomology, with particular reference to preparation for individual research.

ENT. 202y. RESEARCH IN ENTOMOLOGY (Credit commensurate with work).—Hours to be arranged. DR. CORY.

Advanced students having sufficient preparation, with the approval of the head of the department, may undertake supervised research in morphology, taxonomy or biology and control of insects. Frequently the student may be allowed to work on Station or State Horticultural Department projects. The student's work may form a part of the final report on the project and be published in bulletin form. A dissertation, suitable for publication, must be submitted at the close of the studies as a part of the requirements for an advanced degree.

Note: Only students qualified by previous training will be accepted in courses 201 and 202. Consult instructor before registering.

GEOGRAPHY

GEOG. S. 1. ELEMENTS OF GEOGRAPHY (2).—11.15, FF-104. MR. DIEHL.

This course is a study of the elements of the natural environment which influence human activities. The chief purpose of this course is to give the student a thorough knowledge of the principles of geography and the basic phases of the subject matter of geography for a working foundation in the science. Map reading and interpretation will form an essential part of the work. A detailed study of the climatic regions of the world is made emphasizing the interrelations between life—plant, animal and human, and human—and the natural environment.

The following materials will be used in this course: (1) J. Paul Goode, "School Atlas," Revised and Enlarged; and (2) Salisbury, Barrows, and Tower, "Elements of Geography."

GEOG. S. 3. GEOGRAPHY OF LATIN AMERICA (2).—8.15, FF-104. MR. DIEHL.

This is a college course in the geography of Latin America with special emphasis on Mexico and the "A B C" countries. This course is based upon a regional as well as a political treatment of Latin America. The chief purpose of this study is to evaluate the natural environment as a factor in (1) the major human activities in each region, and (2) the economic, political and social problems which confront these peoples.

The following materials will be needed for this course: (1) J. Paul Goode, "School Atlas," Revised and Enlarged; and (2) Whitbeck, "Economic Geography of South America."

See also Ed. S. 57, p. 27.

HISTORY AND POLITICAL SCIENCE

H. 1S. HISTORY OF MEDIAEVAL EUROPE (2).—10.15, R-100. DR. JAEGER.

An interpretation of the social and political forces affecting Europe during the ten centuries following the disintegration of the Roman Empire.

H. 2S. MODERN EUROPEAN HISTORY FROM 1500 TO THE PRESENT (2).—*Not given in 1934.*

An examination of the revolutionary and national movements influencing the development of contemporary Europe.

H. 3S. AMERICAN HISTORY-A (2).—*Not given in 1934.*

An introductory course in American History from the discovery of America to 1790.

H. 4S. AMERICAN HISTORY-B (2).—*Not given in 1934.*

Continuation of American History-A to 1860.

H. 5S. AMERICAN HISTORY-C (2).—8.15, S-1. DR. CROTHERS.

A continuation of American History-B to the present time.

For Advanced Undergraduates and Graduates

H. 102S. RECENT AMERICAN HISTORY (2).—*Not given in 1934.*

The history of national development from the close of the reconstruction period to the present time.

H. 103S. AMERICAN COLONIAL HISTORY (2).—*Not given in 1934.*

The history of the American people to 1790. An advanced course in the political, social and economic life of the American nation.

H. 104S. SOCIAL AND ECONOMIC HISTORY OF THE UNITED STATES (2).—9.15, S-101. DR. CROTHERS.

A synthesis of American life from colonial times to the present.

H. S. 110. HISTORY OF LATIN AMERICA (2).—11.15, R-100. DR. JAEGER.

A survey of the economic, social and political development of the countries of Latin America from the colonial period to the present.

POL. SCI. S. 110. PROBLEMS OF GOVERNMENT (2).—10.15, L-107. DR. STEVENS.

This course will examine the current problems of governmental policy, especially in the United States. A short summary of American Constitutional theory and development will be given and comparisons made with the State-controlled economic and political systems of Nazi Germany, Fascist Italy and Communist Russia. The legal and social bases of the new economic role of the United States Government will be explained with interpretation and evaluation of the National Industrial Recovery Acts as applied to the traditional American economic and political organization.

For Graduates

H. 201 S. SEMINAR IN AMERICAN HISTORY (2).—Four periods a week. Time to be arranged. DR. CROTHERS.

Limited to ten students.

HOME ECONOMICS

*H. E. 111S. ADVANCED CLOTHING (2).—8.15-10.05, N-201. MRS. WESTNEY.

One recitation and four laboratories a week. Graduate credit by special permission.

The modeling and draping of dresses, emphasizing the relationship of line, form, color and texture to the individual.

*H. E. 112S. SPECIAL PROBLEMS IN TEXTILES AND CLOTHING (2).—8.15-10.05, N-201. MRS. WESTNEY.

One recitation and four laboratories a week. Graduate credit by special permission.

Each student selects an individual problem.

H. E. 124S. HISTORY OF ART (2).—8.15, N-202. MRS. MCFARLAND.

An introduction to the history of art, emphasizing the development of sculpture, painting and architecture, from the earliest ages to the present.

H. E. 122S. APPLIED ART (1).—9.15, N-202. MRS. MURPHY.

Applications of the principles of design and color to practical problems.

H. E. 135S. PROBLEMS AND PRACTICE IN FOODS (2).—8.15-10.05. Five laboratories a week. N-106. MRS. WELSH.

Experimental work with foods.

*H. E. 131S. NUTRITION (2).—M., W., F., 10.15, N-101. MRS. WELSH.

Nutritive value, digestion and assimilation of foods.

*H. E. 201S. SEMINAR IN NUTRITION (2).—10.15, N-102. MRS. WELSH.

Oral and written reports on assigned readings in the current literature of nutrition. Preparation and presentation of reports on special topics.

* H. E. 111S or H. E. 112S; and H. E. 131S or H. E. 201S will be offered depending upon the demand.

H. E. 147S. THE SCHOOL LUNCH (1).—M., W., F., 8.15, N-101. MISS HARTMANN.

The administration of the school lunch.

H. E. 137S. FOOD ECONOMICS (1).—M., W., F., 11.15, N-101. MISS HARTMANN.

A study of the commercial producing areas and the methods of distribution of food products.

H. E. 140S. HOME NURSING AND FIRST AID (1).—To be arranged.

Home care of the sick; first aid treatment.

H. E. 141S. MANAGEMENT OF THE HOME (2).—10.15, N-202. MRS. MURPHY.

History of the family and of the home; the house, its structures and furnishings; purchasing of all household commodities.

HORTICULTURE

Graduate students in Horticulture may arrange to take and receive credit for one or more of the following courses provided a sufficient number of students enroll.

HORT. 201y. EXPERIMENTAL POMOLOGY (6).—Three lectures. To be arranged. DR. BEAUMONT and DR. SCHRADER.

A systematic study of the sources of knowledge and opinion as to practices in pomology; methods and difficulties in experimental work in pomology, and results of experiments that have been or are being conducted in all experiment stations in this and other countries.

HORT. 202y. EXPERIMENTAL OLERICULTURE (6).—Three lectures. To be arranged. DR. BOSWELL.

A systematic study of the sources of knowledge and opinion as to practices in vegetable growing; methods and difficulties in experimental work in vegetable production and results of experiments that have been or are being conducted in all experiment stations in this and other countries.

HORT. 205y. ADVANCED HORTICULTURAL RESEARCH AND THESIS (4, 6, or 8).—To be arranged. HORT. STAFF.

Graduate students will be required to select problems for original research in pomology, vegetable gardening, or floriculture. These problems will be continued until completed and final results are to be published in the form of a thesis.

HORT. 206y. ADVANCED HORTICULTURAL SEMINAR (2).—To be arranged. DR. BEAUMONT.

This course will be required of all graduate students. Students will be required to give reports either on special topics assigned them, or on the progress of their work being done in courses. Members of the departmental staff will report special research work from time to time.

Individual adaptations will be made for advanced students to the extent that the facilities of the Department will permit.

MATHEMATICS

MATH. S. 1. GENERAL MATHEMATICS (3).—Five two-hour periods a week. 10.15-12.05, FF-104.

This course has two aims: (1) to reorganize the student's courses in high school mathematics with the view of giving them a broader significance; (2) to extend the student's knowledge of mathematics and to further develop mathematical concept, expression and manipulation. It will include the following topics: quadratics; functions and graphs; functions of acute angles; linear equations; second degree equations including those of the circle, ellipse, parabola, and hyperbola; progressions, binomial theorem, permutations and combinations and elementary statistics.

Text: "General Mathematics," Currier & Watson. (Macmillan.)

MATH. 4S. ANALYTIC GEOMETRY (5).—8.15, P-200. MR. SPANN.

Sufficient time will be devoted to this course to cover the work in Analytic Geometry outlined for Math. 4s, Annual Catalogue. Prerequisites, Algebra and Plane Trigonometry as outlined for Math. 3f, Annual Catalogue. Students who receive credit for this course will be eligible for Math. 7y, Annual Catalogue, provided they have had Solid Geometry. (This course begins June 11.)

MATH. 7S. CALCULUS; ELEMENTARY DIFFERENTIAL EQUATIONS (5).—Prerequisite, first semester of Math. 7y as outlined in Annual Catalogue. 8.15, Q-202. MR. GWINNER.

A continuation of work of first semester in Math. 7y. The course begins with the integration of trigonometric differentials and includes the finding of areas, length of curves, etc., in the plane; and the determination of areas, volume, etc., in space. (This course begins June 11.)

MODERN LANGUAGES

The semester courses in elementary French, German and Spanish are arranged as consecutive courses covering the work of a year. The classes meet 14 hours a week. Students desiring credit for first or second semester only should consult the instructor for hours of attendance and credit.

A. French

FR. 1y. ELEMENTARY FRENCH (6).—M., T., W., Th., 8.15, 10.15 and 1.15; F., 8.15, 10.15, L-303. MISS WILCOX.

Elements of grammar, composition, pronunciation, and translation. This course is the equivalent of the French 1y listed in the general catalogue.

Note: One of the two following courses (Fr. 3y, Fr. 8f) will be given in 1934.

FR. 3y. FRENCH PRONUNCIATION AND CONVERSATION (2).—9.15, L-303. MISS WILCOX.

This course is the equivalent of the French 3y listed in the general catalogue. A more advanced course, the Fr. 8f indicated below, will be substituted for this course if a majority of the students desire the change and are prepared to do more advanced work.

FR. 8f. FRENCH PHONETICS (2).—9.15, L-303. MISS WILCOX.

Intensive study of French sounds. Daily practical exercises in reading and pronunciation. This course is the equivalent of the Fr. 8f listed in the general catalogue.

For Advanced Undergraduates and Graduates

FR. S. 105. FRENCH GRAMMAR AND COMPOSITION (2).—8.15, L-305. DR. FALLS.

Rapid review of French grammar; practical work in translating from English into French; original exercises and themes.

FR. S. 110. THE FABLES OF LAFONTAINE (2).—9.15, L-305. DR. FALLS.

This course has two aims: (1) to acquaint the student with one of the most charming writers of the Classical Period in France; (2) to improve the student's spoken French by daily "Explications de Textes." The course is given in French. Some outside reading is required.

FR. 103 S. HISTORY OF FRENCH LITERATURE IN THE EIGHTEENTH CENTURY (2).—10.15, L-305. DR. FALLS.

A survey of French literature in the eighteenth century. The course is given in French.

For Graduates

FR. 203 S. JEAN-JACQUES ROUSSEAU (1).—M., 2.15-4.15, L-305. DR. FALLS.

Intensive study of the life and works of Rousseau; attention to problems and methods of research; considerable reading for full credit of one hour. The course is conducted in French, and the students will make reports in French.

FR. 209 S. RESEARCH AND THESIS.

Credits are determined by work accomplished.

The higher courses listed above (S 105-209 S) constitute a part of a series given in successive years which will enable students to qualify for the Master's Degree by pursuing a comprehensive plan of advanced study for four summers. Some of the other courses in this series are:

FR. 101 S. HISTORY OF FRENCH LITERATURE IN THE SIXTEENTH CENTURY (1937).

FR. 102 S. HISTORY OF FRENCH LITERATURE IN THE SEVENTEENTH CENTURY (1935).

FR. 104 S. HISTORY OF FRENCH LITERATURE IN THE NINETEENTH CENTURY (1936).

FR. S. 106. THE POETRY OF VICTOR HUGO (1937).

FR. S. 107. FRENCH POETRY SINCE THE PERIOD OF ROMANTICISM (1936).

FR. S. 108. THE MODERN FRENCH NOVEL (1935).

FR. S. 109. THE COMEDY IN FRANCE AFTER MOLIERE (1937).

FR. 201 S. DIDEROT AND THE ENCYCLOPAEDISTS (1937).

FR. 202 S. THE MIDDLE AGES IN FRANCE (1935).

FR. 204 S. VOLTAIRE (1936).

The Summer School French Club

The Club meets once each week to carry out a prearranged program (French games, songs, etc.). The members of the Club will give a play at the end of the Summer Session.

B. German

GER. 1y. ELEMENTARY GERMAN (6).—M., T., W., Th., 8.15, 10.15 and 1.15; F., 8.15, 10.15, M-106. MR. SCHWEIZER.

Elements of grammar, composition, pronunciation and translation. This course is the equivalent of the German 1y listed in the general catalogue.

GER. S. 8. INTRODUCTION TO SCIENTIFIC GERMAN (2).—9.15, M-106. MR. SCHWEIZER.

Rapid review of grammar; reading of simple scientific texts. This course is intended chiefly for scientists who wish to improve their knowledge of German.

C. Spanish

SPAN. 1y. ELEMENTARY SPANISH (6).—M., T., W., Th., 8.15, 10.15 and 1.15; F., 8.15, 10.15, M-104. DR. RICHARDS.

Elements of grammar, composition, pronunciation and translation. This course is the equivalent of the Spanish 1y listed in the general catalogue.

MUSIC

MUS. ED. S. 3. SIGHT READING, EAR TRAINING AND DICTATION (2).—11.15, FF-112. MISS MCEACHERN.

This course aims to develop basic skills in the sight reading of music throughout the first six grades. It will include a study of the rudiments of music, piano keyboard, music terminology, use of the pitch pipe, ear and eye recognition of tonal and rhythmic groups found in sight reading materials of these grades. The above subject matter will be taught through actual song materials suitable for classroom use, thus assuring direct application of skill gained and at the same time providing an extended song repertory for the student.

Sight reading will be taught as to children in the classroom and will illustrate the teaching procedure advocated in the class in Elementary School Music-A.

Text: "Music Hour," Books II and III (Silver Burdette.)

MUS. S. 1. HISTORY OF MUSIC-A (2).—*Not given in 1934.*

A survey of the development of music from early times to the beginning of the modern periods. Pre-Christian music; the early Christian music, including didactics; folk music of the middle ages; development of vocal polyphony; church music in the Renaissance-Reformation period; the birth of opera and oratorio; development of Italian, French and German opera; development of Protestant Church music.

MUS. S. 2. HISTORY OF MUSIC-B (2).—10.15, Aud. MR. GOODYEAR.

A survey of the history of Modern Music. The development of musical instruments and the rise of instrumental music; Bach and Handel; classicism and romanticism; the early symphonists; the advent of the music drama and nationalism; the modern composers.

*MUS. S. 5. ELEMENTARY HARMONY (2).—10.15, FF-112. MISS MCEACHERN.

This course aims to give a practical treatment of theory of music as related to the classroom. It includes a study of major and minor scales, intervals, triads, cadence, simple harmonic progressions, primary triads in first and second inversions, secondary triads, the dominant seventh chord, and the elements of musical form. The above theory will be taught through musical illustration and will be used as a basis for ear training, dictation and melody writing.

Special attention will be given to the functional aspects of theory of

* The course for which there is the greater demand will be given.

music as applied to the piano keyboard in transposition, chording, harmonization of melodies, and improvisation of accompaniments.

Texts: "An Approach to Harmony"—O. McConathy (C. C. Birchard.)
"Harmony for Ear, Eye and Keyboard"—A. E. Heacox (Oliver Ditson.)

*MUS. S. 6. INTERMEDIATE HARMONY (2).—Prerequisite, Elementary Harmony or equivalent. 10.15, FF-112. MISS MCEACHERN.

A continuation of Elementary Harmony. This course will include a study of primary and secondary chordal progressions, modulation, inversions, and the dominant seventh chord. The above theory will be taught through ear training, dictation, four part harmonization of melodies, and harmonic analysis in hymn and folk music. Special attention will be given to keyboard harmony.

MUS. S. 7. MUSIC LITERATURE (2).—9.15, FF-112. MISS MCEACHERN.

This is an introductory course in music literature dealing with types of composition in both vocal and instrumental fields. It includes a study of folk song, art song, opera and oratorio, idealized dance forms, instrumental suite, sonata, symphony and symphonic poem. By means of abundant musical illustrations, through directed listening and actual music making, this course aims to acquaint the student with those masterpieces of music which should be the possession of every generally cultured person. The purpose is to stimulate appreciation and enjoyment of music rather than to build up a body of facts about music.

Text: "From Song to Symphony"—D. G. Mason (Oliver Ditson.)

MUS. ED. S. 10. CHORAL TECHNIQUE (2).—8.15, FF-112. MISS MCEACHERN.

This course aims to develop the vocal technique of the teacher through the artistic singing of choral music suitable for high school use. It will include a study of the fundamental principles of voice production, breath control, phrasing, diction, and interpretation, illustration of which will be made in song material of different grade levels. Special attention will be given to such problems of choral technique as conducting, testing, and classification of voices, balance of parts, vocal combinations, planning rehearsals, program building and accompaniment playing.

A feature of this course will be the making and learning of several special programs for use during the school year. Practical experience will be given the student in conducting and accompanying this song material.

Texts: "Essentials on Conducting"—Karl Gehrkens (Oliver Ditson.)
"Junior Laurel Song"—Armitage (C. C. Birchard.)

MUS. ED. S. 12. ORCHESTRAL INSTRUMENTS (2).—11.15, Aud. MR. GOODYEAR.

This course aims to develop elementary skills of performance on orchestral instruments. It includes a study of the mechanism, register, tuning, fingering and use of the principal instruments in each orchestral choir, and provides actual experience in playing music suitable for use in high school orchestras.

This course offers a practical demonstration of the problems of the beginners orchestra. A beginners orchestra will be organized among the students—and the teaching procedure will illustrate those principles advocated in Mus. Ed. S. 13.

Students are urged to bring their instruments with them—not only those instruments they can play—but also those instruments they wish to learn to play.

Texts: "The Universal Teacher"—Maddy and Giddings.

MUS. ED. S. 13. THE HIGH SCHOOL ORCHESTRA AND BAND (2).—8.15, Aud. MR. GOODYEAR.

This course deals with the organization, management and financing of the high school orchestra and band; selecting, buying and caring for instruments; the technique of class instruction; instrumental ensembles; formation of typical programs; rehearsal routine; score reading; conducting, and practical experience in transposing and arranging music for orchestra and band.

A feature of this course will be the examination and evaluation of a large amount of music suitable for use in high school orchestra and band.

Text: "Instrumental Technique"—Maddy and Giddings.

PHYSICS

PHYS. S. 1. GENERAL PHYSICS (3).—*Not given in 1934.*

A study of the physical phenomena in mechanics and heat, designed for students desiring a general survey of the field of Physics. The lectures are supplemented with numerous experimental demonstrations.

PHYS. S. 2. GENERAL PHYSICS (3).—Eight periods a week. 1.15-3.05, R-100. MR. EICHLIN.

A study of the physical phenomena in electricity, magnetism and light, designed for students desiring a general survey of the field of physics. The lectures are supplemented with numerous experimental demonstrations.

PSYCHOLOGY

PSYCH. S. 121. SOCIAL PSYCHOLOGY OF CONTEMPORARY AMERICAN LIFE (2).—Lectures supplemented by selected readings. 11.15, T-315. DR. SPROWLS.

Social change in America since 1914: (1) The influence of inventions in creating wants; (2) The interaction of nations during and since the war; (3) The rise and growth of group sentiments; (4) Propaganda, advertisement, leadership; (5) The probable future of our cultural achievements.

PUBLIC SPEAKING

P. S. 9 S. DEBATE (1).—Three periods a week. M., T., W., 10.15, L-203. PROFESSOR RICHARDSON.

A study of the principles of argumentation and debate. Class work in argumentation and debate.

P. S. 11 S. ORAL READING (1).—Three periods a week. M., T., W., 9.15, L-203. PROFESSOR RICHARDSON.

Study of the technique of vocal expression. The oral interpretation of Literature. Study of methods of teaching reading in the public schools.

P. S. 13 S. READING AND SPEAKING (1).—Three periods a week. M., T., W., 11.15, L-203. PROFESSOR RICHARDSON.

The principles and technique of oral expression; enunciation, emphasis, inflection, force, gesture, and the preparation and delivery of short original speeches. Impromptu speaking. Theory and practice of parliamentary procedure.

P. S. S 21. VOICE DEVELOPMENT (2).—8.15, L-203. MRS. PROVENSEN.

The aim of this course is to improve the voice, to give training in distinguishing correct and defective sounds and to acquaint the student with speech defects and methods for correction. The procedure includes: Voice control, diaphragmatic support and tone placement; diction upon the basis of phonetics; correction of speech defects or difficulties with individual attention to students; illustrations of classroom presentation of lessons in speech improvement.

ZOOLOGY

ZOOL. 1. GENERAL ZOOLOGY (4).—Five lectures; five two-hour laboratories. Lecture, 1.15, L-107; laboratory, 8.15, L-105. DR. PHILLIPS.

This is an introductory course that deals with the basic principles of animal life as illustrated by selected types from the more important animal groups. At the same time it serves as a survey of the major fields of Zoological sciences.

CHESAPEAKE BIOLOGICAL LABORATORY

This Laboratory is on Solomons Island, Maryland, in the center of the Chesapeake Bay country. It is sponsored by the University of Maryland and the Maryland State Conservation Department, in cooperation with the Goucher College, Washington College, Johns Hopkins University, Western Maryland College, and the Carnegie Institution of Washington. It affords a center for wild life research and study where facts tending toward a fuller appreciation of nature may be gathered and disseminated. The program projects a comprehensive survey of the biota of the Chesapeake region.

The laboratory is open from June until September, inclusive, and during the season of 1934 courses will be offered in the following subjects: Algae; Animal Ecology; Biology of Aquatic Insects; Invertebrates; Diatoms; Economic Zoology; Protozoology; Biological Problems.

These courses of three credit hours each are for advanced undergraduates and graduates. They cover a period of six weeks. Not more than two courses may be taken by a student, who must meet the requirements of the Department of Zoology as well as those of the Laboratory before matriculation. Each class is limited to five matriculants. Students working on special research problems may establish residence for the entire summer period.

Laboratory facilities, boats of various types fully equipped (pumps, nets, dredges, and other apparatus), and shallow water collecting devices are available for the work without extra cost to the student.

For full information consult special announcement which may be obtained by applying to R. V. TRUITT, Director, College Park, Maryland.

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